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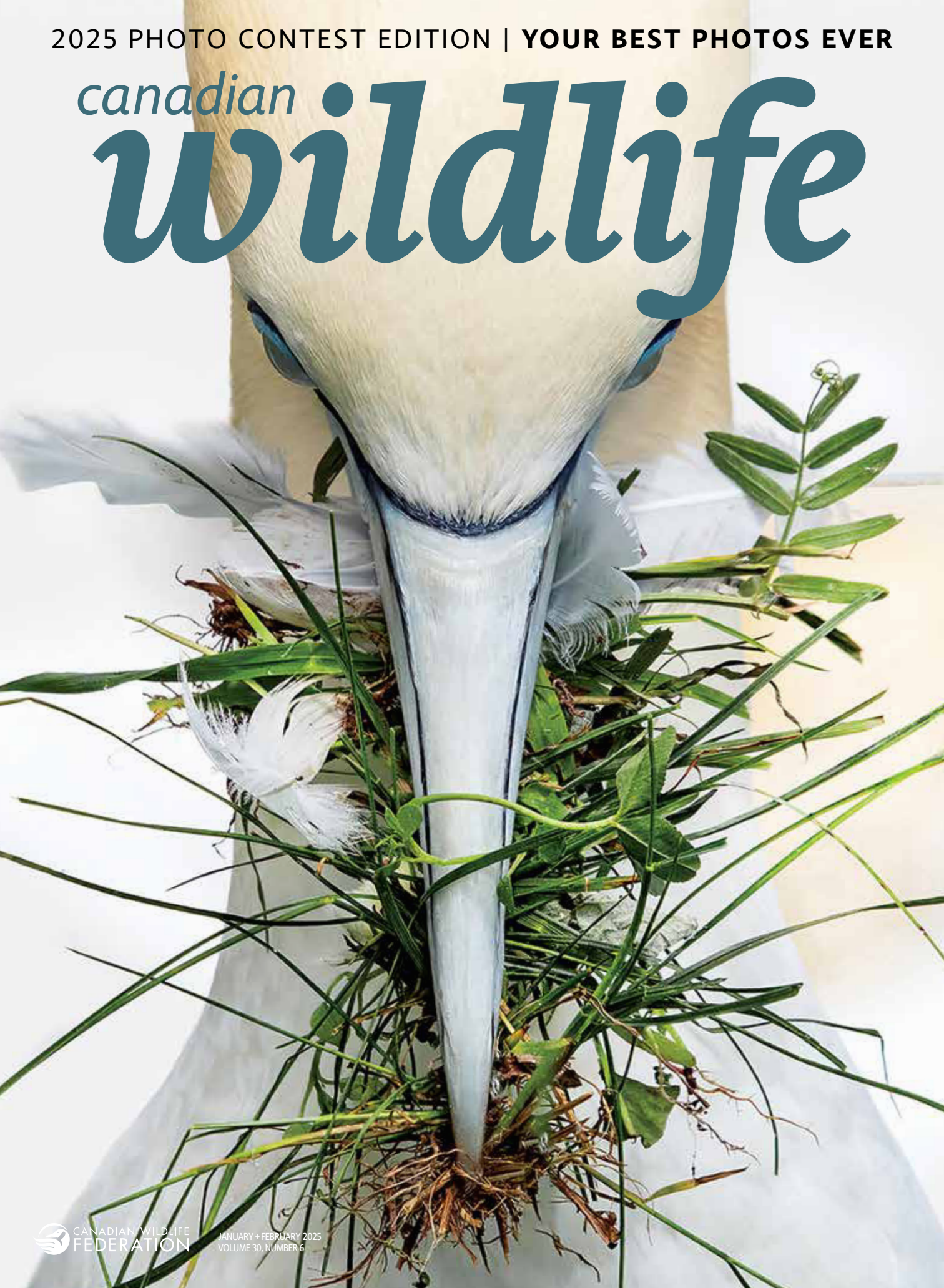
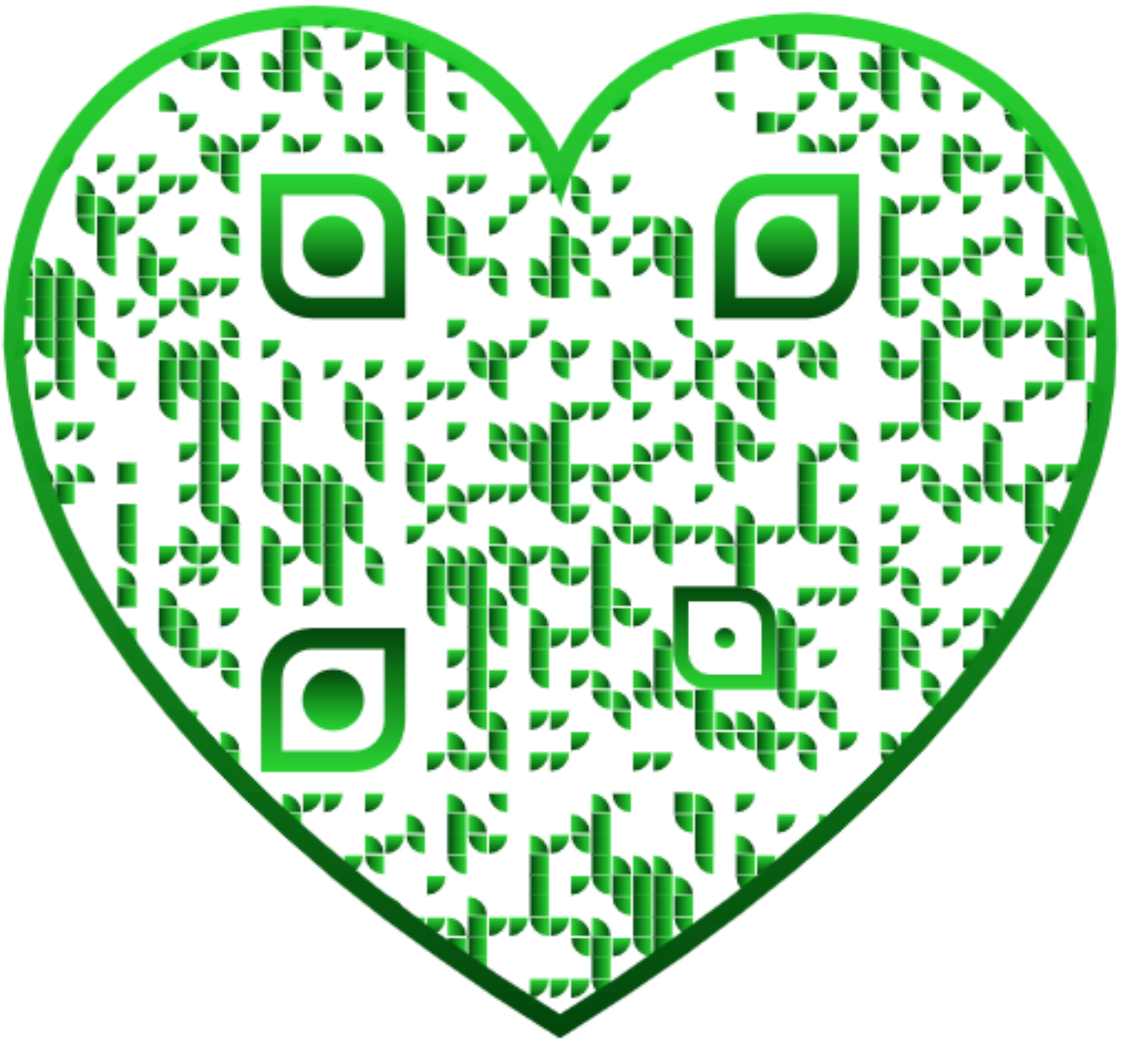


CANADIAN WILDLIFE FEDERATION
JANUARY + FEBRUARY 2025
VOLUME 30, NUMBER 6



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CanadianWildlifeFederation.ca/BelowZero

CANADIAN WILDLIFE FEDERATION

canadian wildlife

January + February 2025
Volume 30, Number 6
WildlifeMagazine.ca

14

Visit our website to join CWF's national photo club

Reflections of Nature 2025

Welcome to our annual celebration of images submitted by our readers — more than 13,000 entries in all. We present some of the very best

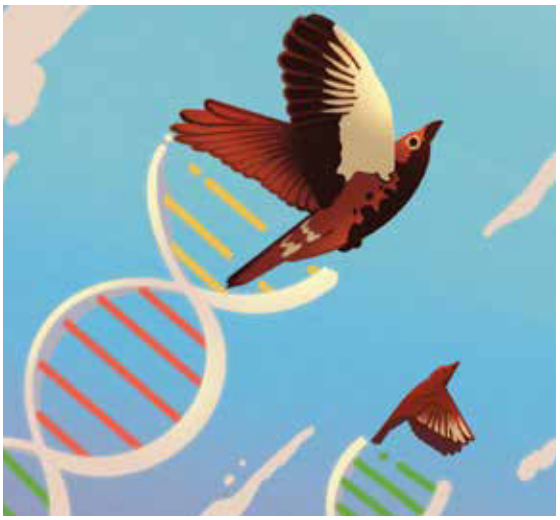
PLUS

21 How to be an ethical nature photographer

26 What to look for in a camera

33 Pro tips from some of Canada's best

COVER: MARIE-JOSÉE D'AMOUR.



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canadian wildlife

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The Canadian Wildlife Federation is dedicated to ensuring an appreciation of our natural world and a lasting legacy of healthy wildlife and habitat by informing and educating Canadians, advocating responsible human actions and representing wildlife on conservation issues.

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JESSICA DEEKS

Reflecting Nature

WELCOME TO THE FIRST ISSUE OF 2025.

It is a tradition at CWF that each January this magazine features the winning images of our annual Reflections of Nature photography contest. For 20 years, we have proudly provided amateur photographers across the country with the opportunity to share their favourite images, and for the very best to be celebrated for their wonderful accomplishments. It is in this spirit that we share with you, Canadian nature lovers, this year's amazing images of our beautiful country.

This was a record year for submissions, with more than 13,000 images received! That was more than double the previous year's count, which was already our highest to date. As you can see, the interest is great and growing, something that's reflected in the quality of this year's submissions. We deeply thank all participants for joining in the fun and sharing your favourite pictures.

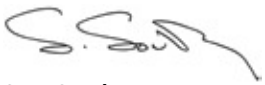
For many, entering a major photo competition can be daunting and a little intimidating. I believe that is why many of our amateur contributors start to engage first through CWF's monthly Photo Club. Each month, we receive hundreds of submissions from readers. Each day, selected entries are featured as the "Photo of the Day" on our website and shared with the world on Instagram (cwf_fcf). Many of these submissions are also selected to join the pages of this magazine's regular features, such as "In Focus" — our two-page photograph spread. On page 6, you can find the first In Focus of 2025.

The history of photography in what we now call Canada is directly linked to the land and its natural magnificence. Around the time of Confederation, photographers became essential members of geological and geopolitical exploration survey teams across Canada. While it was hard going having to haul bulky equipment, chemicals and glass slides over portages and ancient trails, readers of *The London Illustrated News* in the 1860s apparently couldn't get enough of the images of new and unfamiliar Canadian wildlife and landscapes.

Today, of course, nearly every one of us has a camera. The smartphone has made almost everyone a potential wildlife photographer. I have to say, we love how many of you are turning your lens to nature. Wildlife photography is an increasingly important tool in the world of conservation. Great images create empathy and appreciation for these amazing creatures and landscapes, helping mobilize more people to make the effort to protect and conserve this land's invaluable natural heritage. These pictures also help us in identifying species, feeding the growing global phenomenon of citizen science initiatives like our very own iNaturalist.ca.

To those of you who shared inages this year, we thank you. To the winners, our congratulations! To our readers, we invite you to enjoy all the wonderful images — they truly are phenomenal. For those of you who have not participated yet, do visit our website and search for our Photo Club to get started. We hope to see your images in next year's special photo issue!

Warmest regards,



Sean Southey
Chief Executive Officer, CWF

BARRED OWL
LANARK, ON

Barred owl in a wintry pine forest, Lanark Highlands, eastern Ontario

Photo by Mark Golding

Originally submitted to a Canadian Wildlife Federation photo contest. Visit ***cwf-fcf.ca*** *to learn how you can enter your wildlife photos.*

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THE WILD GANG

With this new, free app, kids can get to know our amazing wildlife better while having fun! The Wild Gang is full of videos, games and activities for kids aged 7 to 12.

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WAYNE LYNCH.

LEATHERBACK SEA TURTLE

SCIENTIFIC NAME
Dermochelys coriacea

REGION
Atlantic and Pacific coasts

CONSERVATION STATUS
Endangered

WHY SO SPECIAL?
Hot-blooded, deep-diving giant

THERE ARE SEVERAL REMARKABLE REASONS WHY THE LEATHERBACK, one of the world's seven species of sea turtles, is exceptional and deserves recognition. To begin with, it is the largest turtle in the world, growing up to two metres long and weighing as much as 500 kilograms — twice the weight of the Aldabra giant tortoise, which ranks number two in size.

From the Caribbean, the leatherback migrates to coastal Canada, most often on the Atlantic side, from April to September. Here, it dives to depths of 1,000 metres or more, hunting deep-sea jellyfish. The leatherback's dives are the deepest of any of today's 10,000-plus reptiles. At such depths, the pressure is 100 atmospheres, a level at which an unprotected human diver would instantly be crushed.

The leatherback is also found farther north than any other sea turtle and has been recorded north of the Arctic Circle, swimming in sea water surrounded by floating ice. It seems that leatherbacks, unlike other reptiles, behave like hot-blooded mammals and are able to maintain an elevated body temperature in frigid water. In one study, a leatherback had a body temperature of 25.5 C despite swimming in 7.5 C water. —**WAYNE LYNCH**

BREATH-TAKING BIRDS

A recent study highlights how migrating birds' adaptable respiratory systems make their amazing feats possible

By Alanna Mitchell Illustration Jarred Briggs

FOR AS LONG AS HUMANS HAVE walked the planet, we have gazed to the skies and marvelled at the birds. How do they swoop and sing and build intricate nests and pollinate and sow seeds and fertilize plants and gobble up pesky insects and also be so visually alluring?

How have they adapted to thrive in such a vast array of temperatures and landscapes, from lush tropical forests to the tips of Antarctic icebergs to sheer cliff faces to sere deserts?

But maybe greater than any other puzzle is how some of them migrate, making the round-trip journey to get to their breeding grounds and back. Some, like the bar-tailed godwit, which spends summers in the Arctic and winters in the south, have been known to make the journey in a non-stop flight of nearly 12,000 kilometres. The tiny blackpoll warbler, weighing in at just 12 grams, can wing across 2,540 kilometres in just 62 hours, a flabbergasted researcher discovered several years ago.

It's not just distances across the globe that astonish. It's also height above sea level. Some migrating birds are capable of flying at an altitude of 5,000 metres, where the oxygen is thin and the air pressure is low. It's a tactic to avoid predators, storms and heat and maybe pick up tailwinds to speed the odyssey.

The whole enterprise of migration is a feat of endurance that beggars the imagination, fuelled by little more than the bird's own fat stores and the oxygen it breathes. A human would have to train to do a marathon like that, not to mention pile on the carbs. How do birds manage?

The question has become more pressing in this era of climate disruption. For one thing, the conditions of migration themselves are

MIGRATING BIRDS' INCREDIBLE ENDURANCE IS FUELLED BY HOW MUCH OXYGEN THEY CAN MANAGE TO TAKE IN

changing. Weather is getting more unpredictable. Wildfires, with their dangerous heat and smoke, are more common. Temperatures in general are more variable, and so is humidity. Migrating birds may need to ascend to higher, cooler, calmer altitudes in decades to come. Will they be able to make even greater physiological changes to do that and keep up their treks?

It matters because bird populations are already struggling. The latest *State of the World's Birds* report, published in 2022 by BirdLife International, found that nearly half the planet's avian species are in decline and one in eight faces extinction.

But there's a bigger question in play, too. Can researchers find clues about how other creatures might be able to adjust in the future?

That's why a recent study conducted at the Advanced Facility for Avian Research at Western University in London, Ont., is so fascinating. Published in 2023 in the *Journal of Experimental Biology*, it's the first study to track how songbirds modify their bodies during migration.

The researchers, Catherine Ivy and Christopher Guglielmo, experimented on different types of songbirds caught as they rested at Long Point, Ont., during their migration south: warblers, thrushes and vireos. They divided them into two groups, altering the hours of daylight the birds were exposed to. Half were tricked into thinking they weren't migrating anymore. Half thought they were still on the fly.

Then researchers put them in a special wind tunnel where they could alter air pressure, oxygen, humidity, temperature and wind speed. The idea was to test the migrating birds' use of oxygen in conditions that would be present at ever-higher altitudes, pushing the birds to new limits.

Some birds figured out how to breathe differently so they could increase the amount of oxygen they took in. For example, migrating vireos and warblers took slower and sometimes deeper breaths than when they weren't migrating.

In some cases, the birds were able to shift how their hemoglobin used oxygen. Some could increase the density of capillaries in the muscles needed for flight. Three of the species — warbling vireos, red-eyed vireos and blackpoll warblers — could lower their metabolic rate and body temperature during migration. It seems they could simply survive on less energy.

Myrtle yellow-rumped warblers worked out how to use oxygen from their lungs more efficiently, but they didn't change their metabolism or body temperature, nor did they change their breathing.

The most intriguing finding was that different birds changed their bodies in different ways. There were "no consistent strategies," the study found.

To me, that hints at the marvellous, poorly understood plasticity built into the DNA of living creatures. It's a beacon of hope that some species, at least, will figure out how to keep going under duress.

Honour a Conservation Champion!

NOMINATIONS NOW BEING ACCEPTED
Entry deadline January 31, 2025

Nominations are now open for the 2025 CWF Conservation Achievement Awards to honour Canadians who demonstrated extraordinary commitment to wildlife conservation and innovation.

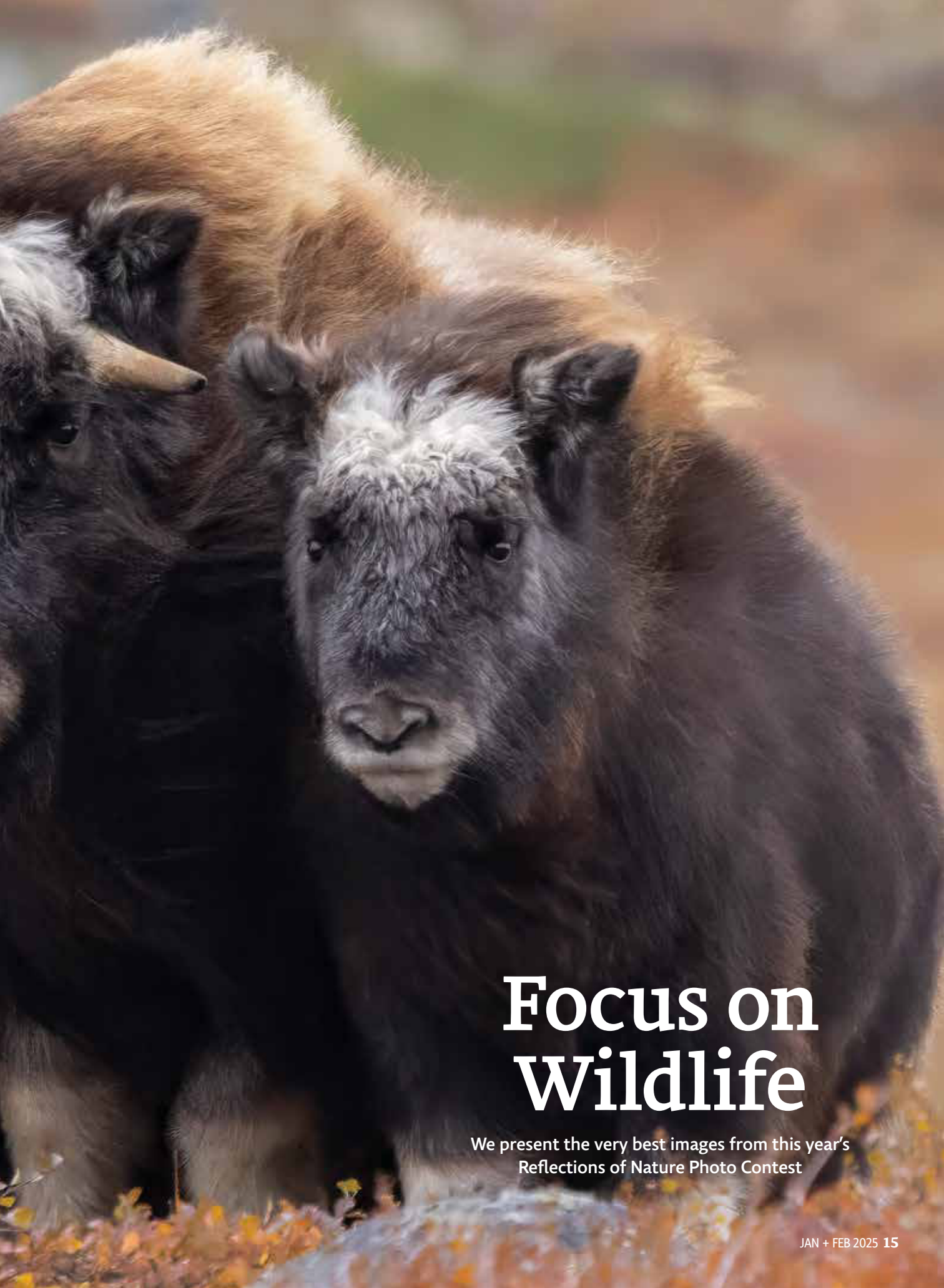
LISA NADON
Winner of the 2024 Youth Mentor Award, honouring an individual or group that has made a significant contribution in creating or presenting programs that introduce youth to the importance of conservation, habitat and wildlife.

For the nine categories and nomination details, visit:
CanadianWildlifeFederation.ca/Awards

2025 CWF CONSERVATION AWARDS

CANADIAN WILDLIFE FEDERATION

PHOTO: JOEL RODRIGUEZ



Focus on Wildlife

We present the very best images from this year's Reflections of Nature Photo Contest

WELCOME TO OUR ANNUAL celebration of Canadian wildlife photography. For 20 years now, CWF has been inviting Canadians of all ages and backgrounds to submit their favourite photos to our annual Reflections of Nature contest. This year, we received a record-shattering number of original submissions: more than 13,000 unique images were submitted in total. That's double our previous best year!

In the pages that follow, we are pleased to feature the submissions that our team of judges selected as the best in each category. From among the very best, the judges also selected a grand prize winner (and a runner-up) for the most worthy shot of all. We offer our sincere thanks to everyone who entered and our congratulations to those honoured here.

CANADIAN LANDSCAPE
Showcasing and celebrating Canada's vast and beautiful wilderness through the lens of the beholder

CONNECTING WITH NATURE
Canadians enjoying nature through exploration, relaxation, adventure, family and sport

FINDING FLORA
Exploring the beauty of Canada's native plant life in all shapes, sizes, types and colours

FOCUSING ON FAUNA
Capturing Canada's amazing wildlife, from the tiny bug to the imposingly fierce mammal

URBAN INTERACTION
Dedicated to illuminating the sometimes surprising, often delightful, intersection of nature and our urban spaces

ENTER OFTEN!

In addition to the annual Reflections of Nature Photo Contest, CWF's Photo Club contest has winners chosen by popular vote every month of the year. Images submitted are often featured in a CWF publication or web page. And there are prizes, too. To learn more, visit cwf-fcf.org and search "monthly photo" to enter.

(previous page)

FOCUS ON FAUNA
Honourable Mention

Herd of muskoxen
Wolf Lake Camp, Northwest of Kuujjuaq, Nunavik, Quebec

Norrie Franko
Wellandport, Ontario

FOCUS ON FAUNA
Honourable Mention

Pacific tree frog
North Saanich, British Columbia

Christy Grinton
North Saanich, British Columbia

FOCUS ON FAUNA
Winner

Gannet delight
Bonaventure Island, Gaspé, Quebec

I went to the island to photograph northern gannets. I spent most of the time lying on the grass taking shots when this gannet came just in front of me to collect materials to make a cosy nest. I had to zoom out because it was so close!

Marie-Josée D'Amour
Longueuil, Quebec

Canon 7D Mark II with Sigma 100-400mm; ISO 320, f8, 1/2000

FINDING FLORA
Winner

Courtyard of my building
Richmond, British Columbia

I started capturing the beauty of nature through a camera lens in 2018, and it has been a journey of healing and discovery. When I was struggling with my health, my husband gifted me a camera to encourage me to step outside and find joy and inspiration. Photography soon became my therapy, where I could focus on the intricate beauty around me instead of my own struggles.

Visnja Gasparic Vojvodic
Richmond, British Columbia

Nikon D7200 with IRIX 150mm macro; ISO 720; f5; 1/640

CANADIAN LANDSCAPES
Honourable Mention

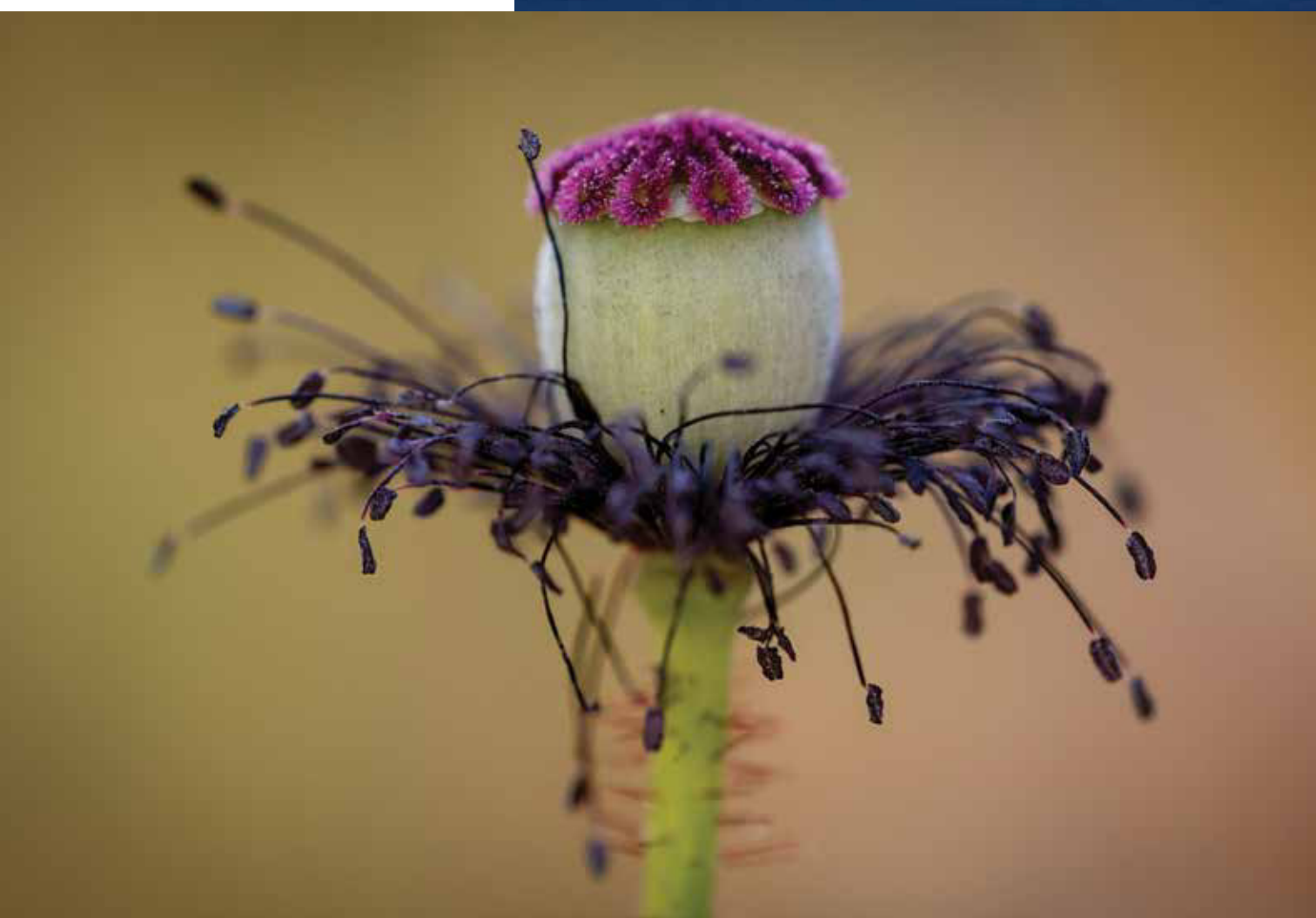
Near Aberdeen, Saskatchewan

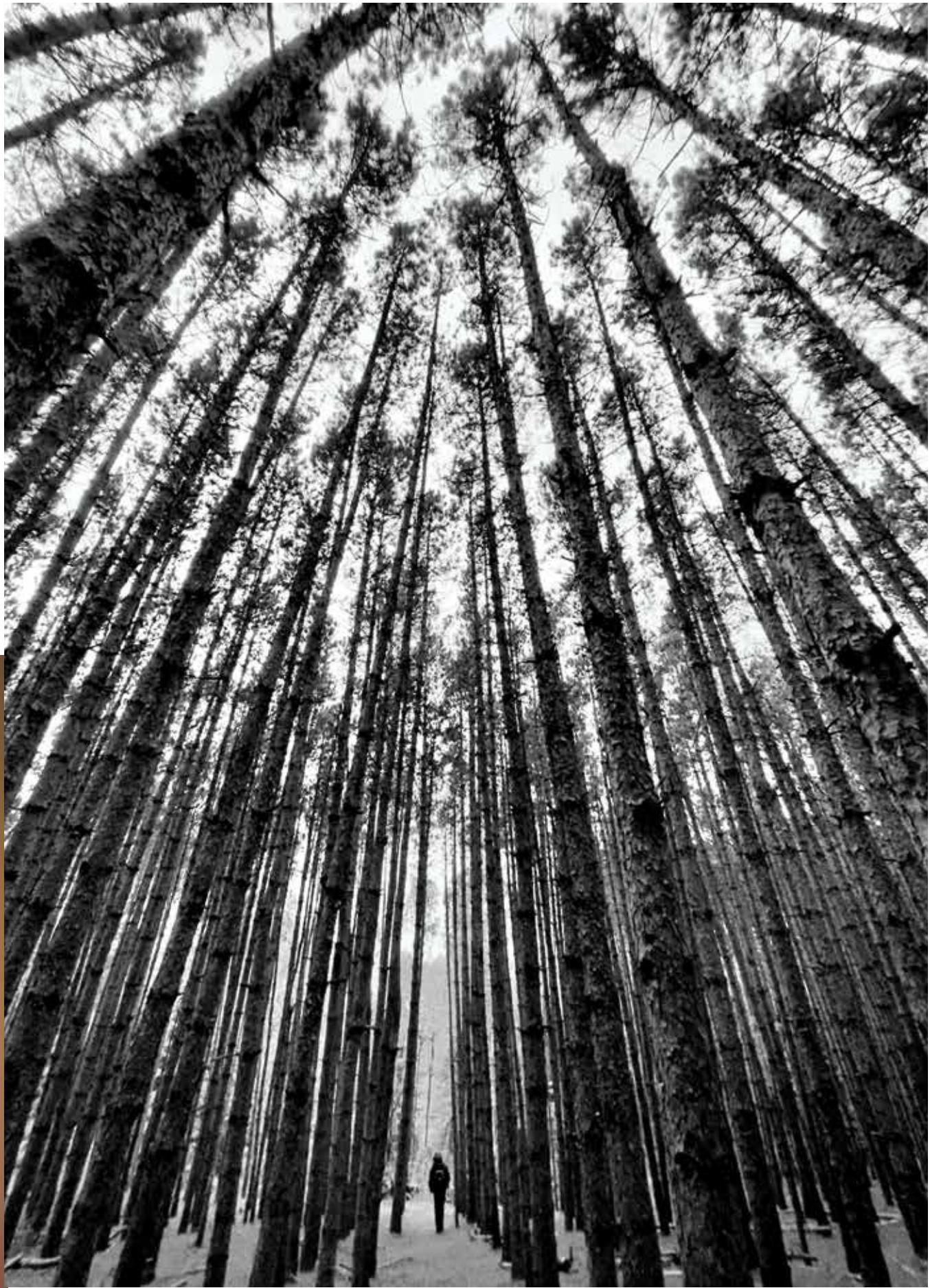
Cathleen Mewis
Saskatoon

CONNECTING WITH NATURE
Honourable Mention

Granite Ridge Trail
Killarney Provincial Park, Ontario

Leigh Johnston
Hamilton, Ontario





CONNECTING WITH NATURE
Runner-up

Descending at dusk
Mont Sutton, Quebec

Jonathan Franchomme
Quebec City

CONNECTING WITH NATURE
Honourable Mention

Frog with boy
Clifford, Ontario

Tanya Sokalski
Clifford, Ontario

TAKING CARE

How to be a GOOD wildlife photographer, not just a great one. When in nature with your camera, do right by wildlife

Know your subject
Learn about the animals you are photographing. Understand what they need. Knowing their behaviours will bring you a better shot—and neither subject nor photographer will be harmed.

Don't touch
Never handle wildlife or touch or intrude on their dens, burrows or nests.

Stay quiet
Blend in. Don't be disruptive. Avoid artificial lighting or, if necessary, keep it diffused. No flash ever—the bright light will damage many species' sensitive eyes.

Leave no trace
Everything you carry into the woods must come back out. It doesn't matter if it is biodegradable.

Stick to the rules
Know the local regulations and get all required permissions. Respect your fellow photographers.

CHAD GERAN

CANADIAN LANDSCAPES
Runner-up

Lightning strike and double rainbow
Winkler, Manitoba

Joey Siemens
Winkler, Manitoba

FINDING FLORA
Runner-up

Foxtail, after a rain
Saint-Charles-sur-Richelieu, Quebec

Nico Finelli
Saint-Charles-sur-Richelieu, Quebec

URBAN INTERACTION
Winner

Reflections
Burnaby, British Columbia

Out early with a friend, our plan was to take sunrise pictures at Deer Lake. It was a foggy morning and made for nice fall photos. I spotted two mallard ducks on the lake in the morning fog and realized the reflection of the buildings in the morning sun would make for a unique photo.

Susanne Spanell
Vancouver

URBAN INTERACTION
Honourable Mention

Starling murmuration
Essex County, Ontario

Gerhard Kaiser
Windsor, Ontario

GRAND PRIZE
Winner

In Hot Pursuit
Great Bear Rainforest, British Columbia

I was exploring the Great Bear Rainforest on a sea wolf expedition with First Nations guide Marven Robinson. As we sat quietly on the rocky shoreline, a pack of coastal wolves slipped silently from the mist and started fishing, expertly navigating the river to catch salmon at low tide.

A subspecies of grey wolf endemic to the Pacific Northwest, coastal wolves have evolved to fish in the coastal estuaries, taking advantage of the rich resources. Pacific salmon and wolves are both keystone species and important players in maintaining a fragile ecosystem.

"In Hot Pursuit" shows the intensity of a life-and-death battle for survival, particularly in the focus and explosive energy of the wolf.

Barb Callander
Kawartha Lakes, Ontario

Canon EOS R3 with RF 600 mm; ISO 1000; f5; 1/800

THE RIGHT STUFF

Focus on these features when choosing a camera for wildlife photography

High frame rate
More frames per second means the more you can capture the key instant when the shot is just so.

Fast and silent
You need a quick shutter to capture the unfolding action, and you want it quiet to avoid disrupting your subjects.

Make low light a highlight
In the field, you can't control light levels, so you need a camera and lens set-up that can handle the dimmest light of dawn and dusk when wildlife is most active.

Ride the ISO range
Choose a camera with a wide ISO range so you can optimize light and attain the shutter speed needed to capture that fleeting image.

Ready, steady…
Image stabilization reduces the effect of shaky hands or vibration and gives you the crispest image.

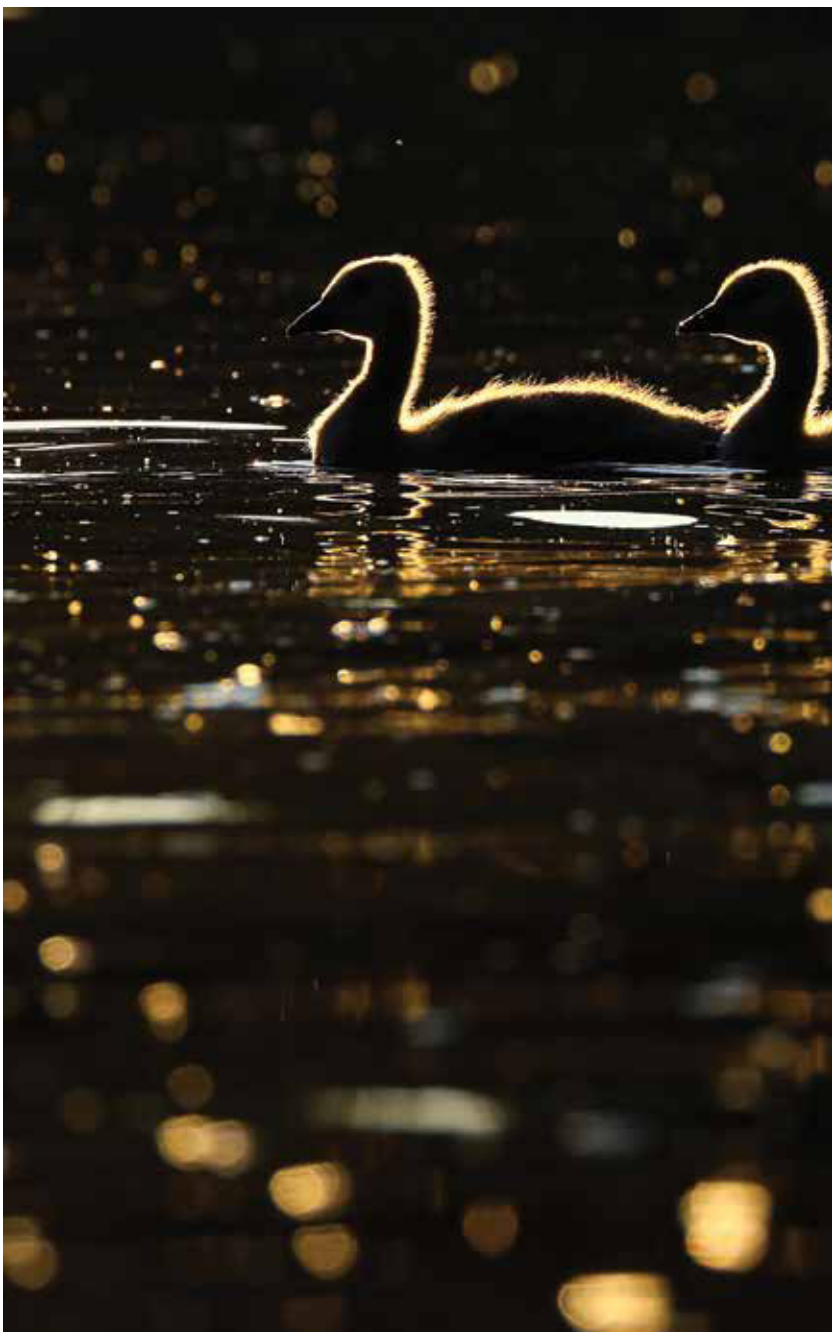
Flexibility in the field
Cameras with interchangeable lenses give you the flexibility to home in on detail or zoom out for the big picture.

GRAND PRIZE
Runner-up

Canada geese
Chaudière River, Lévis, Quebec

Olivier Gicquel
Quebec City

Canon R8 with 200-800mm; f9; ISO 500; 1/1000



CHAD GERAN

FOCUS ON FAUNA
Honourable Mention

Foxes on the beach
North Shore, Prince Edward Island

Brittany Crossman
Riverview, New Brunswick

FOCUS ON FAUNA
Honourable Mention

Pelicans
Titmarsh Lake, Northern Ontario

Sherry Malinoski
Kakabeka Falls, Ontario

FINDING FLORA
Honourable Mention

Blanket flowers
Iona Beach Park, British Columbia

Crystal Chan
Richmond, British Columbia

CONNECTING WITH NATURE

Winner

Natural texture

Lake Opeongo, Algonquin Park, Ontario

It was late summer when I ventured into Algonquin Park hoping to find the cold morning air mixing with the warm summer waters of Lake Opeongo. I arrived an hour before sunrise. The air was cold, and fog was starting to rise from the water as the sky began to light up. The cloudscape began to glow and reflect in the calm waters below. I like big texture and colour in the images I create. From top to bottom and from side to side, this image is full of texture and colour.

Dana McMullen

Eagle Lake, Ontario

Nikon D610 at 15mm; f5; 1/80

FOCUS ON FAUNA
Runner-up

Moose
Near Mont Ernest-Laforce, Parc national de la Gaspésie, Quebec

Jesse Olivier
Châteauguay, Quebec

FINDING FLORA
Honourable Mention

Water lily
Ahmic Harbour, Ontario

Alanna Cluff
Springwater, Ontario

CONNECTING WITH NATURE
Honourable Mention

Turtle crossing
Bolingbroke Road, Tay Valley, Ontario

Trevor Lowthers
Dartmouth, Nova Scotia

URBAN INTERACTION
Runner-up

Polar bear at abandoned radar station
Churchill, Manitoba

Steven Rose
Scarborough, Ontario

CHAD GERMAN

WHAT OUR PROS SAY

Favourite hacks from our top shooters

As part of our mandate to help conserve wildlife across our country, Canadian Wildlife magazine commissions photos from some of the top nature photographers in the world, many of whom reside and work right here in Canada. We polled them for their best advice for beginners.

Light is everything. For the best photos, avoid midday shoots, and stick to mornings and late afternoons when the light is best and wildlife tends to be more active.

Always bring lots of snacks and a big thermos of something warm to drink.

Warm, comfortable clothing is essential, particularly extra socks. You take better pictures when your feet are dry and warm. If you're not comfortable while you work, you won't work well.

Bring a bunch of silica gel packs in a sealable plastic bag to help dry your gear when the rains come.

Keep camera equipment to a reasonable minimum: take in only what you might need.

The best camera is the one you have with you. Equipment is important but not as important as being in the right place at the right time—and being ready!

For self-taught photographers, a wealth of information is freely available online. Skip the "gear talk" and focus on tutorials that teach technique and esthetics.

Study and learn from photographers whose work you admire as you find your own direction and style. It is easy to follow your favourites online.

CANADIAN LANDSCAPES
Winner

Edge of the world
Elliston, Newfoundland and Labrador

This is the beautiful coastline of Elliston, Newfoundland and Labrador. It is one of my favourite views along the Bonavista Peninsula. Near here is a puffin colony, a very popular destination with photographers. I had gone hoping to capture the puffins at sunrise, but the sky had remained overcast. After a short walk to this location, the timing was perfect, with the splash of colour in the clouds and the early morning fog hanging around before it moved off for good.

Leona Rockwood
St. John's

Nikon D750 with Nikon 24-70 lens at 28mm; ISO 100; f11; 1/6

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Learn more by visiting CanadianWildlifeFederation.ca/Education.

CANADIAN WILDLIFE FEDERATION

Outdoors

Field Guide + Birding + Urban Wildlife

STEFFEN HAUSER / BOTANIKFOTO / ALAMY STOCK PHOTO.

FIELD GUIDE

Butternut Tree

Laid low by a devastating disease, this historic species clings to its deep New Brunswick roots

THE BUTTERNUT VALLEY IN NEW Brunswick is a central clutch of fertile land about midway between Moncton and Fredericton. The area is redolent of the past, dotted with numerous covered bridges, old mills and crumbling historic cemeteries. The charming name is a nod to the sizable population of prized native butternut trees that once thrived in the area. Those butternuts are largely history now too, a sad truth throughout the tree's Canadian range.

Oddly, the butternut name for this area appeared only in 2023 when the province mandated new rural governance, and the nascent regional

The tree's distinctive nut only appears after 20 years, with quantity peaking over the next 20

authority had to choose itelf a moniker. It opted for the poetic, if somewhat ironic, name of a tree disappearing from the area. (There is a nearby Butternut Ridge.) Despite the disconnect, the area's name may yet prove to be fitting because, according to some researchers, New Brunswick is the last best hope to ensure the native tree's survival.

Juglans cinerea, as it is known to botanists, is a fascinating and important species, once central to Indigenous culture wherever it grew. It flourished from what is now known as Arkansas through southern Ontario and Quebec into New Brunswick, preferring wet-soil riparian landscapes or well-drained loams and gravelly limestone. It is intolerant of shade overhead and is frequently found in the company of species like black cherry, beech, black walnut, oak, and various maple and birch variants. (Some researchers report a link with a rare understorey ginseng.) Butternut trees produce a substance called juglone, which is toxic to many species, from tomatoes to rhododendrons, and beneficial to others, like beets and impatiens.

The robust butternut (also referred to as a white walnut) is a small- to medium-sized tree, seldom reaching more than 30 metres high, with a comparatively narrow trunk and a broad and irregular crown. Mature trees will sink a large and deep taproot if conditions allow, in addition to its usual wide-ranging lateral roots.

Up close, one is struck by the unusual compound pinnate leaf structure of between 11 and 19 stalkless, serrated, yellowish-green leaflets and brownish fruit that will leave your hands darkened and stained. Leaves are densely hairy on the underside, supported by thick, hairy and yellowish-orange twigs featuring unusually elongated terminal buds. These features are the easiest way to distinguish the butternut from its better-known and more widespread relation, the black walnut tree.

When the butternut is young, its bark is grey and smooth, but as it ages, the bark morphs into irregular, flat-topped sections, with wide ridges limned by dark fissures. Its fruit is a single-seeded 4- to 6-centimetre ovoid nut wrapped in a rough-to-the-touch husk covered with short sticky hairs. (The nut, too, is easily distinguished from black walnut fruit, which is smooth and hairless.) The tree's seed bearing starts only at 20 years and peaks within a few decades before declining in the tree's old age — butternuts seldom live beyond 75 years. Healthy, large seed crops occur only every two or three years.

According to the archives of the nearby Maliseet Nation Conservation Council, Indigenous communities on what is now the St. John River relied on butternuts gathered in the fall for their winter foodstuffs, particularly the buttery oil that lends it its name. It was useful as well when mixed with bear grease to repel mosquitoes. The bark was handy as the basis of a salve for burns.

Today, the tree is endangered throughout its range. The population has been decimated by the lethal butternut canker disease, putting the species on Canada's endangered list beginning in 2005. First found in Wisconsin in 1967, the disease had killed 80 per cent of U.S. trees by 1990. It reached New Brunswick in 1997 and within a decade had severely reduced what was once a common local species. The gruesome symptoms of the disease make it obvious: long, deep cankers appear in the bark; in spring, they exude a nasty black liquid, and in the summer, the desiccated cankers form black patches. Trees are infected irrespective of age, size or health, with the first cankers usually found low in the crown. The disease then spreads toward the ground as precipitation carries the lethal spores down. There is no known control for butternut canker.

Still, some experts are optimistic. They are resting their hopes on New Brunswick, which is still home to some number of trees. Are trees here the key to the endangered tree's survival? Genetic testing indicates New Brunswick's butternuts are slightly different from butternut trees elsewhere in the North American range and may prove to be more likely to survive the onslaught. An effort is underway now to gather, preserve and protect seeds from butternut trees with New Brunswick origin.

Someday perhaps, Butternut Valley will once again be home to this remarkable tree. **—MEL WALWYN**

ESA HILTULA / ALAMY STOCK PHOTO.

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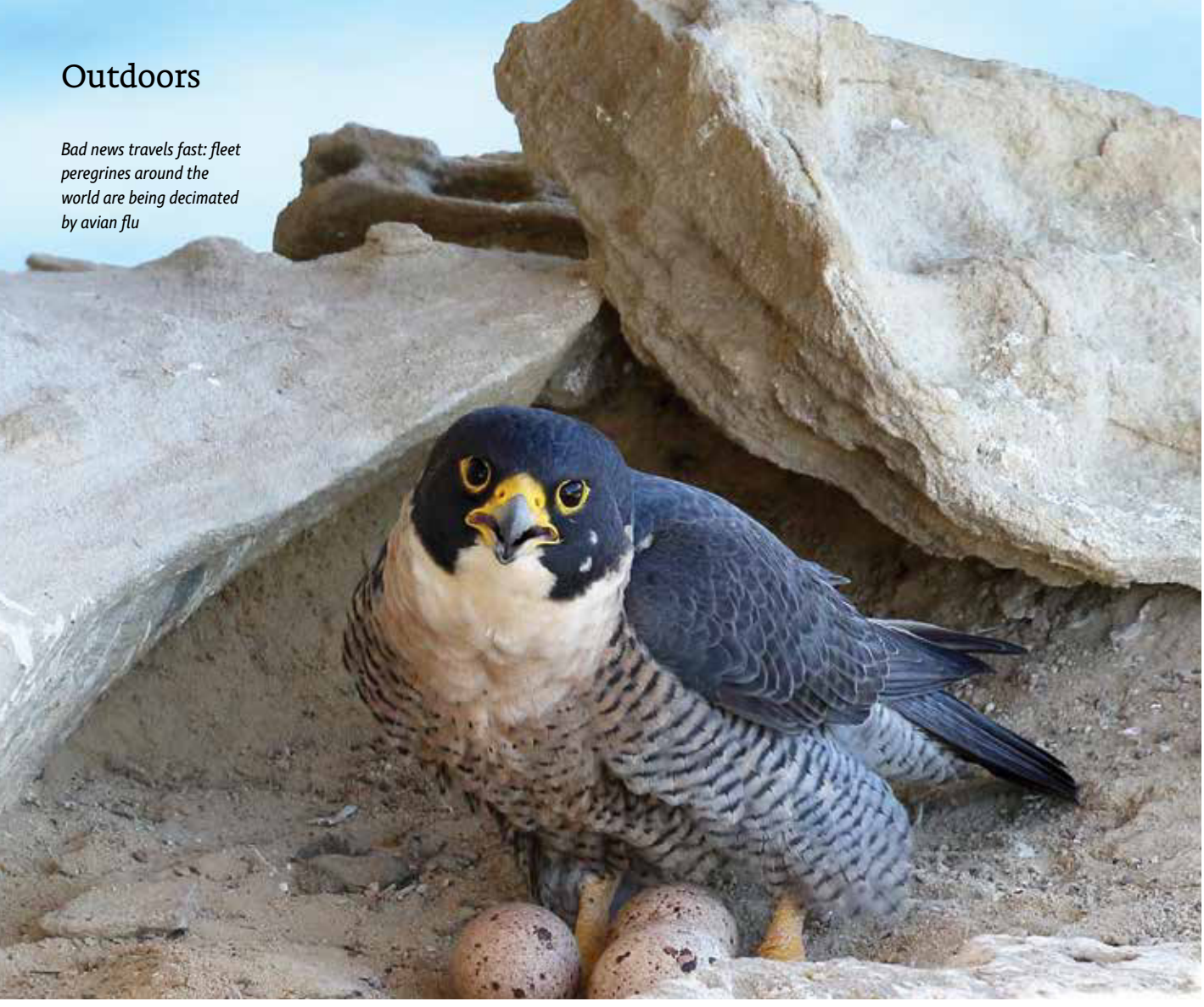
CANADIAN WILDLIFE FEDERATION

PHOTOS: REFLECTIONS OF NATURE PHOTO CONTEST/SHERRY NIGRO; GETTY IMAGES



Bad news travels fast: fleet peregrines around the world are being decimated by avian flu

KEN GRIFFITHS / ISTOCK / GETTY IMAGES PLUS.

BIRDING

Falcons Falling

Peregrine populations are collapsing everywhere due to highly pathogenic avian flu

AS I WRITE THESE WORDS, PEREGRINE falcon eyries are flickering out like city lights in a power failure, across North America and beyond. The news of these silent nesting sites is devastating. It brings back terrible memories of the near worldwide extinction of peregrine falcons in the 1960s and 1970s due to the rampant overuse of organochlorine pesticides like DDT.

It is a different problem this time.

In mid-summer of 2024, I heard the bad news from Bud Anderson, director of the Raptor Research Group in Washington state and a close friend. He called to tell me that longtime raptor tracker Skip Ambrose, a retired U.S. Fish and Wildlife Service field worker in Alaska who has been monitoring peregrines since 1973, was reporting a 30 per cent drop in the local peregrine falcon population. Anderson immediately revisited the 16 eyries that host the San Juan Island peregrine population in Washington. What he found there was grim: the numbers suggested an 87 per cent crash.

Bad news travels fast, as they say, especially in our modern world of social media. It didn't take long for a global email distribution group of 90 or more peregrine experts to be set up to share data on nest-site occupancy. I was honoured to be among them. What we heard was that not all peregrine populations worldwide were suffering such a disastrous turn, but many were. I was especially taken aback to learn from the Icelandic Institute of Natural History that a well-studied local population of the gyrfalcon, the country's national bird (and my favourite), had suffered a 45 per cent drop in eyrie occupancy over the previous five years.

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CANADIAN WILDLIFE FEDERATION

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PHOTOS: KEN CANNING / ISTOCK / GETTY IMAGES PLUS VIA GETTY IMAGES; MICHELLE VALBERG

Based on ensuing discussion among the experts, it seemed clear, to me at least, that the culprit behind the falcon's precipitous decline is highly pathogenic avian influenza.

This was confirmed for me in October 2024. Nicole Nemeth, a scientist with the University of Georgia in the U.S., gave a plenary address on the impact of this strain of bird flu on raptors in general to a packed room at the annual meeting of the Raptor Research Foundation. Her presentation slides told a disturbing story.

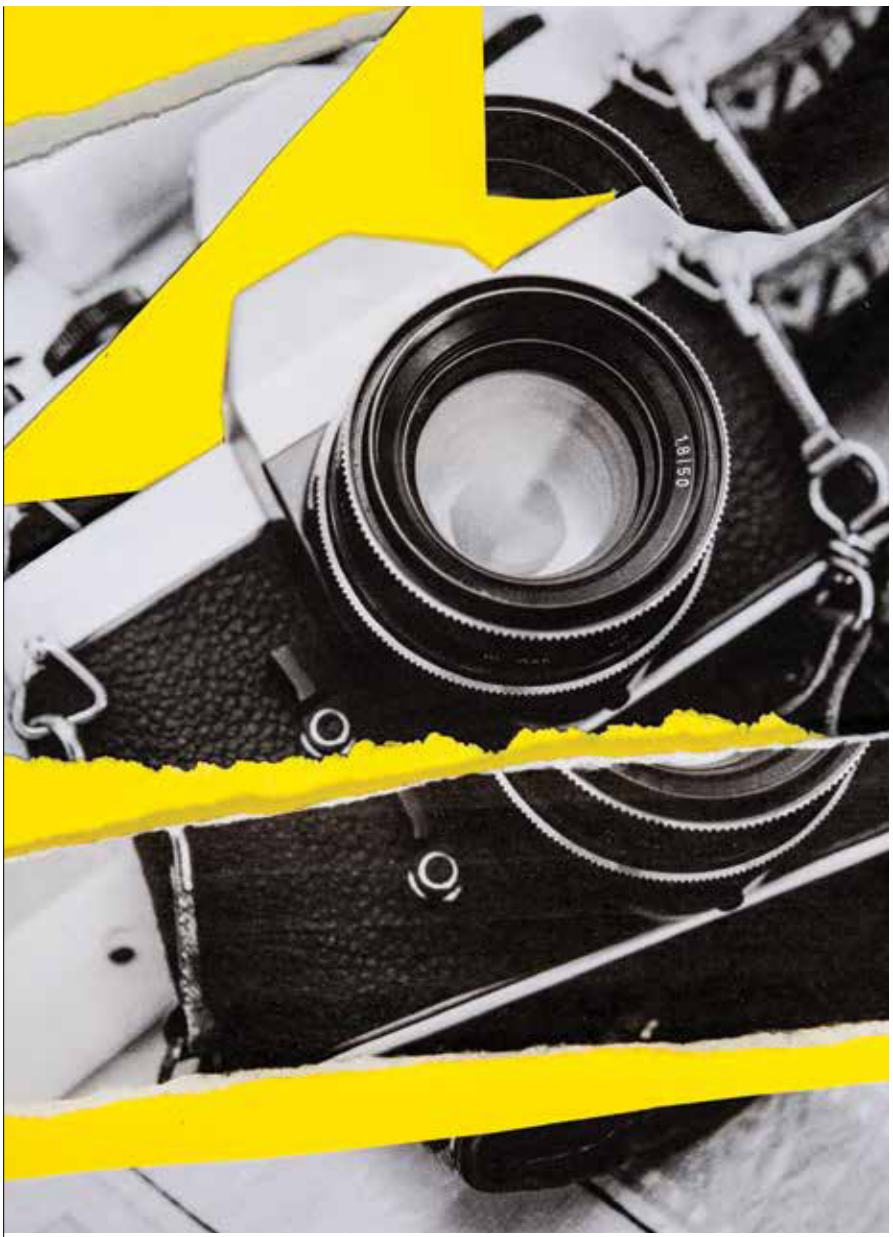
First, highly pathogenic avian influenza is caused by a globally distributed, highly adaptable virus with a broad host range. The virus's natural reservoirs are shorebirds and waterfowl, but poultry are also affected. The highly pathogenic strain has been reported in the United States and Canada, in all provinces and 49 states, since 2021 or 2022. Given the nature of this kind of reporting, said Nemeth, the numbers in the news are drastically under-representing the problem. A particularly disturbing pie chart in her talk showed an unsurprising 63 per cent of all waterfowl tested had the virus, but that as many as 28 per cent of all raptors had it.

Peregrines feed mainly on waterfowl, shorebirds and seabirds. This would certainly account for their high frequency of contracting the bird flu. But Nemeth also reported the virus has now been detected in mammals, as many as 400 species. That changes everything—because most raptors, from tiny owls to large condors, prey on mammals. It explains why Nemeth listed 29 different North American raptor species showing positive for avian influenza. The highest numbers were among bald eagles, followed by black vultures, red-tailed hawks and great horned owls. Nemeth also cited a disturbing report of 21 virus-caused deaths in the population of 350 highly endangered California condors remaining in the wild.

What is especially alarming is that the virus takes out adult breeding birds, hence the empty eyries. Could enough surviving birds of a given species with some immunity serve as a reservoir of future breeders to refill those territories? It's hard to predict.

We will have to watch and wait.

—DAVID BIRD



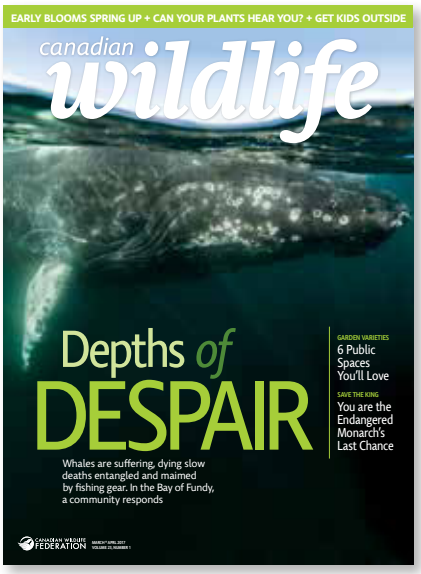
STOCKSY.

URBAN WILDLIFE

Group Shots

A camera club is a great way to learn the secrets of urban nature photography and see your neighbourhood in a new light

A DOZEN OR MORE PEOPLE WIELDING AN ASSORTMENT OF CAMERAS large and small move slowly through the scrub at the edge of an urban greenspace. Here, the mown grass gives way to brush, weeds and wild sedge amid crumbling concrete and scree. The diverse group members fan out in every direction, some pausing and bending down to get a closer look, others training their lenses upwards into the trees, others still descending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Depths of DESPAIR
Whales are suffering, dying slow deaths entangled and maimed by fishing gear. In the Bay of Fundy, a community responds
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6 Public Spaces You'll Love
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Killer whales are invading Hudson Bay + Grizzly behaviour — nature vs nurture
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Marianne and Matt Gee are working for pollinators—one hive at a time
Your BEST SHOTS
GET A FRESH VIEW OF CANADA'S NATURAL WORLD — THROUGH THE EYES OF THE WINNERS OF CWF'S ANNUAL PHOTO CONTEST

Insects Are First Responders in Fort McMurray + Climate Change: Poetry Behind the Data
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All photography is about sharing: images, of course, but also tips, memories and inspiration

through the rough grass to a riverbank with a submerged shopping cart, a couple of muddy, old tires and more plastic bags than anyone would bother counting.

They are in search of urban wildlife in Old Montreal, and, judging by the steady sound of shutter clicks and self-winding whirrs, they are finding plenty.

Urban wildlife photography has seen an amazing explosion in interest in just the last few years. It is easy to speculate why. For the first time in history, virtually every human carries with them a high-quality, easy-to-use camera with almost limitless capacity to store and share images. Second, there is a growing awareness of global heating and rising concern for the ongoing health of the planet and the future of all the species that occupy it. Third, post-COVID a new appreciation — or is it a fascination? — has emerged for the wildlife that is all around us in our own neighbourhoods.

Nature photography is not, by definition, a solitary activity. Really, photography is about sharing. Images, of course, but also memories, experiences, techniques, tips and, yes, favoured locations. That sociability explains the recent parallel growth in the number of photography clubs in cities across the country.

Joining a local group may be the best way for you to ensure you're getting the most from your time behind the viewfinder. First, the whole premise is to get together with others who share your passion for nature photography. In St. John's, the Camera 35 photography club has nearly 100 members, many of whom gather in biweekly meetings from September to June. That leads to socializing and friendships, of course, but also to a whole group of fellow enthusiasts with whom you can share your images and compare notes on what makes a great shot. No matter the level of experience, photographers love an audience they can share their work with instead of filling another memory stick or computer drive with images nobody will ever see.

Sharing ideas, inspirations, techniques, funny stories and cautionary tales — that's the best way to get better at your craft. At meetings of the Whitehorse Photography Club they have something they call "photoshare." The simple act of discussing your work with encouraging fellow enthusiasts in kindly exchanges of differing perspectives is a rewarding and fun way to contribute to the local community of shutterbugs.

Many clubs across Canada regularly host friendly (as well as more serious) competitions catering to a wide range of skill levels. Contest stipulations often challenge new photographers to learn advanced techniques and go in search of new and unfamiliar subjects. And in the smaller, local competitions, judges provide notes and commentary on selected submissions, highlighting the strengths and weaknesses of each composition.

Many clubs, like the Saskatoon Photo Club, regularly host "critique nights" (which are more fun than they might sound). Once or twice a year, they convene a volunteer panel of trained photography judges to assess and provide comments, compliments and encouraging advice on submitted photos. In addition to giving a leg up to wildlife photographers new to the world of competition, the events are helpful in training up new judges for the regular monthly and annual competitions they host.

There are photography clubs like these in towns and cities across the country. If you are not sure where to look, visit the website of the Canadian Association for Photographic Art (**capacanada.ca**). In addition to useful resources for the aspiring outdoor photographer, it provides a nation-wide listing of 100 photography clubs, local and regional groups.

And don't forget to join CWF's monthly photo club for a chance to be part of the national community. **—MAEVE ROBINSON**

KALI9 / ISTOCK / GETTY IMAGES PLUS.

SKIPPING BEDTIME
Sperm Whales don't need much rest to feel rested. They take short and frequent naps near the water's surface. But get this. They don't breathe or move while they're napping under-water. Crazy!
SLOW DOWN
While some animals like the Black Bear will hibernate when Old Man Winter rolls into their neck of the woods, others will go into shorter periods of inactivity, called torpor. That means that animals like the American Badger will drop their body temperature, rate of breathing and even their heartbeat to cut the amount of energy they need to survive the winter.
SLUMBER PARTIES
Sea Otters don't like to snooze alone. That's why they'll join paws when they feel sleepy. That way they'll be able to stay together as a group and won't drift away from each other. While you might see just a couple of Sea Otters slumbering together, they also love a slumber party with dozens join-ing the floating group! Can we join?
HEAD IN THE CLOUDS
Have you ever woken up in the middle of the night standing in your parents' room or at the bathroom sink wonder-ing how in the world you got there? Birds do the same thing, except they may wake up in a differ-ent province! Okay, it's a little more complicated than that. You see, birds can sleep with one eye open and only half the brain buzzing with activ-ity while flying south for the winter. But they let themselves sleep this way only when air cur-rents are rising to help keep them flying high.
YOU SNOOZE, YOU LOSE
Scientists have found that herbivores (animals that eat plants) get less shut-eye than carnivores (animals that eat meat) since they need to keep their energy up by chowing down on plants. Deer, for example, get only about three hours of sleep a day, which explains why they're so active at dusk.
16
17

WILD
The Canadian Wildlife Federation's magazine for kids
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Engage
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MISSION ACCEPTED

Five Questions with Kailey Setter

CWF's Manager of Experiential Education

This fall, the CWF Education department launched Mission Biodiversity — a year-long educational campaign designed to engage teachers and students in taking action to combat the five main threats to biodiversity. It's just one of the compelling initiatives spearheaded by Kailey Setter, CWF's Manager of Experiential Education.

1. HOW DID YOU GET INVOLVED IN CONSERVATION EDUCATION?

Having grown up in rural Alberta, I had ready access to the outdoors. Looking back, I realize now how important this connection to nature has been in shaping the person I am today. In school, my interest in the environment was sparked further when we started to explore environmental issues in my science and social studies classes. I went to university, earned a geography degree, and started working in the environmental non-profit sector — primarily in education roles. Now, more than 15 years later, I still look back and reflect on some of the transformative experiences I've had along the way, working with a diversity of people, species and habitats across the country. From wading through wetlands with volunteers to documenting frog species to leading students on a field trip through the Alberta badlands, I've had the privilege of experiencing some amazing aspects of nature first-hand, and of working with people of all ages to support its conservation.

2. HOW LONG HAVE YOU WORKED WITH CWF?

I joined the team right before the start of the COVID-19 pandemic, in the fall of 2019. During that period, things were changing quickly, which created a plethora of challenges for teachers, parents and students. However, looking back, I also appreciate how much creativity and innovation happened during that time. I was inspired to see teachers find new ways to approach learning using new technology and tools. It was also rewarding to see students reconnect with nature at school through the increased use of outdoor classrooms and greenspaces. Five years later, I'm even more proud to be working with CWF. CWF has been an education leader for many decades, with well-established programs like WILD Education — our professional development program for educators — but over the past five years, we've expanded our programming even further to reach more Canadians. From interactive webinars with conservation researchers to year-long educational campaigns like Mission Biodiversity, our whole team is passionate about providing Canadians with more opportunities to connect with the natural world, learn more about it and support conservation.

3. WHAT PROGRAMS ARE YOU MOST EXCITED ABOUT FOR THE NEW YEAR?

The year 2025 is certainly going to be exciting! CWF is honoured to have recently acquired Nature Sketch from the Bateman Foundation. We will be working to integrate this art-based nature education program into our curricula. We are also working collaboratively with partners and schools across the country to provide educators with hands-on tools and enhanced opportunities for environmental education.

4. WHY IS MISSION BIODIVERSITY SO IMPORTANT TO YOU?

Biodiversity is a word we hear a lot. It's used by scientists, academics and politicians, but what does it really mean and why should we care about it? The goal of Mission Biodiversity is to highlight the amazing diversity of wildlife and habitats across Canada while also shedding light on the five main things threatening it: climate change, pollution, habitat loss, over-exploitation and invasive species. In learning about these issues and taking action to address them, students, parents, teachers and many other community members can make a real difference for conservation — and that's what gets me excited!

5. HOW CAN PEOPLE GET INVOLVED?

Anyone can become an "Agent of Conservation" by signing up to receive our regular Mission Biodiversity emails and receive each "mission" straight to your inbox. Each one includes videos, projects and educational resources from our Online Learning Library. We also include mission badges to mark your progress. Though we love connecting with teachers and schools, you don't have to be a classroom teacher to get involved. Everyone can get involved and start taking action in their homes and communities!

To learn more, visit **CWFEducation.ca** and then click on WILD Education.

43° 12' 37.5" N
79° 45' 21.4" W

Upper Falls, Devil's Punchbowl
Stoney Creek, Ontario

Photo by Sylvain Champagne

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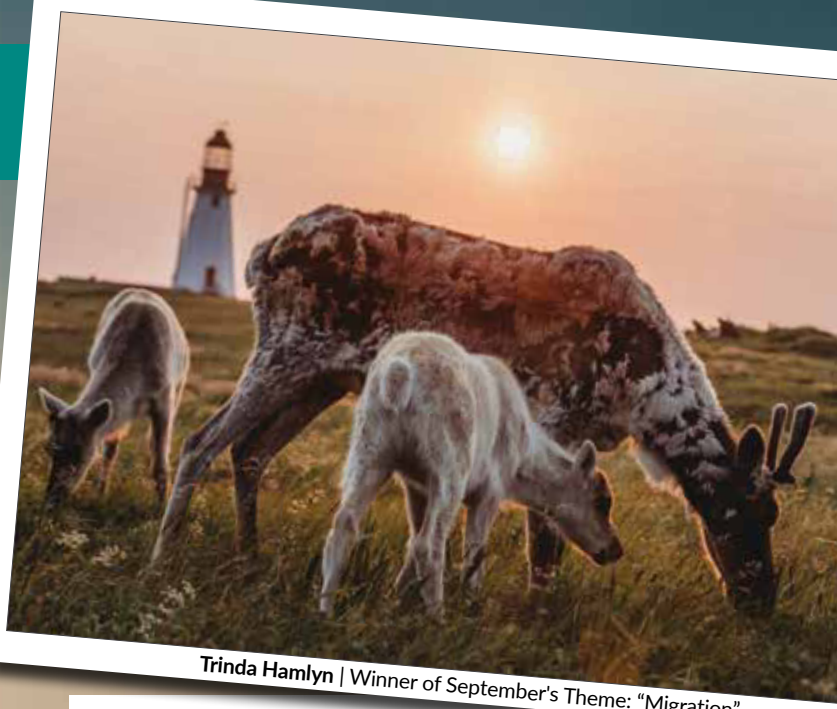

Trinda Hamlyn | Winner of September's Theme: "Migration"

Christy Grinton | Winner of October's Theme: "Playful Moments"

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For more information, visit CanadianWildlifeFederation.ca/PhotoClub.

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